

Work Order ID 71915

Wednesday, July 13, 2011 12:44:27 PM



Page 1

Item ID: D3281-1L02

Accept



Setup Start



Revision ID:

Stop



Item Name: Floor Protector, Fwd LH (Black)

Start Date: 7/13/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 5.00



Customer:

Reference:

Approvals: Process Plan: MF

Date: 11-07-13

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code Accept
Qty Reject
Qty Reject
Number Insp.
Stamp

Draw Nbr

Revision Nbr

D3281

Rev F

DSI 9504

A

100

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Cut Blanks

105

0.00



Dry Material

HandThermo

Memo

0.00

Hand Finishing Thermoforming

Dry Sheet as per QSI022 POLYCARBONATE

Temp: 240° F

Time IN: 4:30 pm 11/07/14

Time OUT: 7:00 am 11/07/15

x5

SH
11/07/15

x5

SH
11/07/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

Item ID: D3281-1L02

Accept



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Item Name: Floor Protector, Fwd LH (Black)

Start Date: 7/13/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 5.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

110

0.00



THERMOFORMING MACHINE

Thermoform

Memo

0.00

x5

Thermoforming Machine

Thermoform as per Dwg. D3281 and Folio FTA 011

Dwg. Rev. FD

Folio Rev. 0

DL
11/07/15

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

x5

Quality Control

130

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

x5

Thermoforming Machine

Trim to Finished Dimensions

DL
11/07/15
DL
11/07/18

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 3

Item ID: D3281-1L02

Accept



Setup Start



Revision ID:

Stop



Item Name: Floor Protector, Fwd LH (Black)

Start Date: 7/13/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 5.00

Customer:

Reference:

Run Start



Approvals: Process Plan: Date:

Tooling: Date:

QC: Date:

SPC (Y/N): Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code Accept Reject Reject Insp.
Qty Qty Number Stamp

140

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

x5

Sh.
11/07/11

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

11 07 20 5

160

Packaging

0.00



Packaging

Memo

0.00

Packaging

11/7/11 SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Page 4

Item ID: D3281-1L02

Accept

Revision ID:

Item Name: Floor Protector, Fwd LH (Black)

Start Date: 7/13/2011 Start Qty: 5.00

Required Date: 7/20/2011 Req'd Qty: 5.00

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

11/7/22 JF
MF
11-07-21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Picklist Print

Wednesday, July 13, 2011 12:44:24 PM

Page 1

Work Order ID: 71915

Parent Item: D3281-1L02

Parent Item Name: Floor Protector, Fwd LH (Black)



Start Date: 7/13/2011

Required Date: 7/20/2011

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev.A. 04.07.01 New issue H KJ/JLM
IPP Rev B. 07.16.2007 Thermoform in house DL IPP Rev. C
Add Step 105 Dry Material 10/04/21 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MLEXS.093-F6006-02

Purchased

No

sf

771.9516

21.665



GE PLASTICS LEXAN SHEET

Location

Loc Qty

Loc Code

therm

771.95158

106751

105.89

110877

666.06158

21.665 sq ft.

Sh.
11/07/12

DART AEROSPACE LTD		Work Order: 71915
Description: Floor Protector, Fwd LH		Part Number: D3281-1
Inspection Dwg: D3281	Rev: F	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST
THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than 0.1875" Go/No Go	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: <i>JK</i>	Date: 11/07/15
-------------------------------	-----------------------

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
18.6	+/-0.100	18.55"	✓		TAPE DL-01	
17.1	+/-0.100	17.065"	✓		TAPE DL-01	
11.7	+/-0.100	11.65"	✓		TAPE DL-01	
0.95	+/-0.030	0.973"	✓		Ulen TH-01	
0.25	+/-0.030	0.265"	✓		Ulen TH-01	
0.030	Min	0.041"	✓		CAL TH-DT	
0.070	Min	0.087"	✓		CAT TH-DT	

Measured by: <i>JK</i>	Date: 11/07/15
Audited by: <i>JB</i>	Date: 11/07/17
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	08.02.28	New Issue	KJ/DL	
B	08.04.16	Dimensions updated per Dwg Rev D	KJ/DL	
C	08.09.12	Tolerance revised for 0.070 dimension	KJ/DL	
D	10.09.01	Dwg Rev updated	KJ	
E	11.06.21	Dwg Rev updated	KJ	<i>[Signature]</i>

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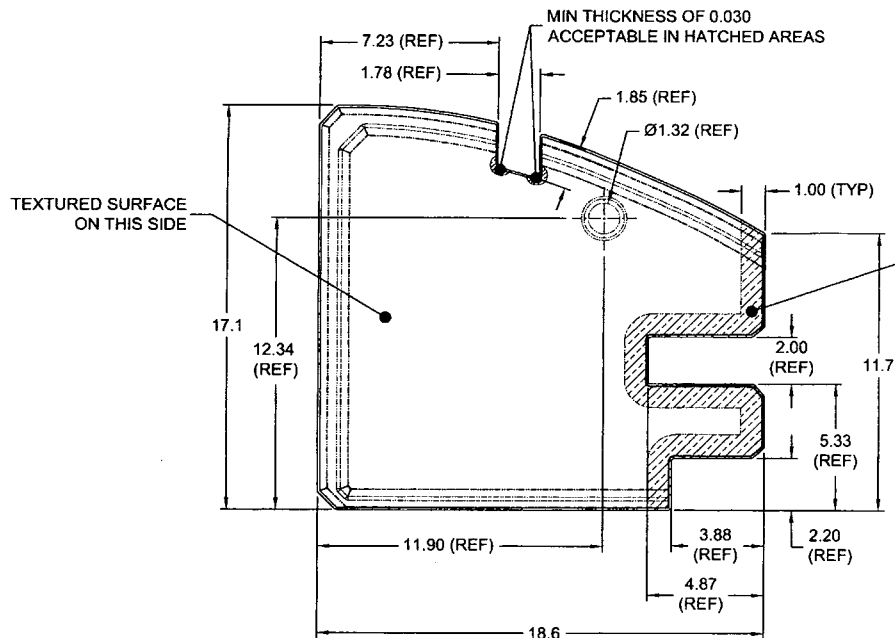
8 7 6 5 4 3 2 1

D

C

B

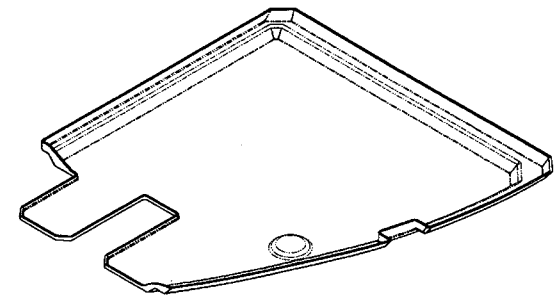
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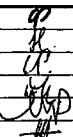
D3281-1 FLOOR PROTECTOR

NOTES:

- 1) MATERIAL: -1L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-1L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENT WITH DART P/N "D3281-1Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-1L02 = 0.95 lb D3281-1L08 = 1.13 lb
- 8) THERMOFORM WITH MOLD D3281-1T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED



RELEASED
2010-11-25

F	NOTES UPDATED. FLAG NOTE 6 WAS 7 & RELOC, D.E.O. D3281-E-1 INC. DIM 17.0 WAS 17.1 (ZN B5-3, B6-4) & 17.7 WAS 17.8 (ZN C5-3, C6-4) REF CAR 10-21.	JPH	10.09.27
E	-3/4 NOW TRIMMED FLAT: RMV 0.25 BEVEL TO FACILITATE TRIMMING (ZN D6-3, D4-4)	CP	10.01.05
D	THICKNESS 0.093 WAS 0.125, MIN THICKNESS 0.070 WAS 0.080, P/N AND B/N ID WITH VIBRATING STYLUS (ZN A7-1, A7-2, A7-3, A7-4); D3281-4 NOW ON PAGE 4; CORRECT WEIGHTS (ZN A8-1, A8-2, A8-3, A8-4)	PH	08.03.28
C	UPDATE DIMS TO MATCH PARTS: COLOUR 701 WAS 700; GENERAL UPDATE	LE	07.10.09
B	NOW LEXAN; DIMS AS MANUFACTURED	CP	05.11.25
A	NEW ISSUE	CP	04.05.03
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D3281	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		FLOOR PROTECTOR	NTS
DATE		10.09.27	
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71915

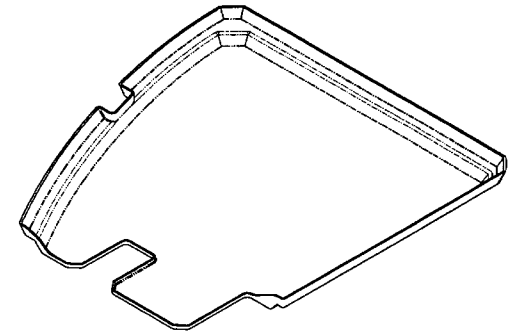
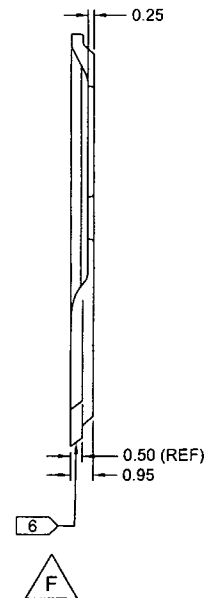
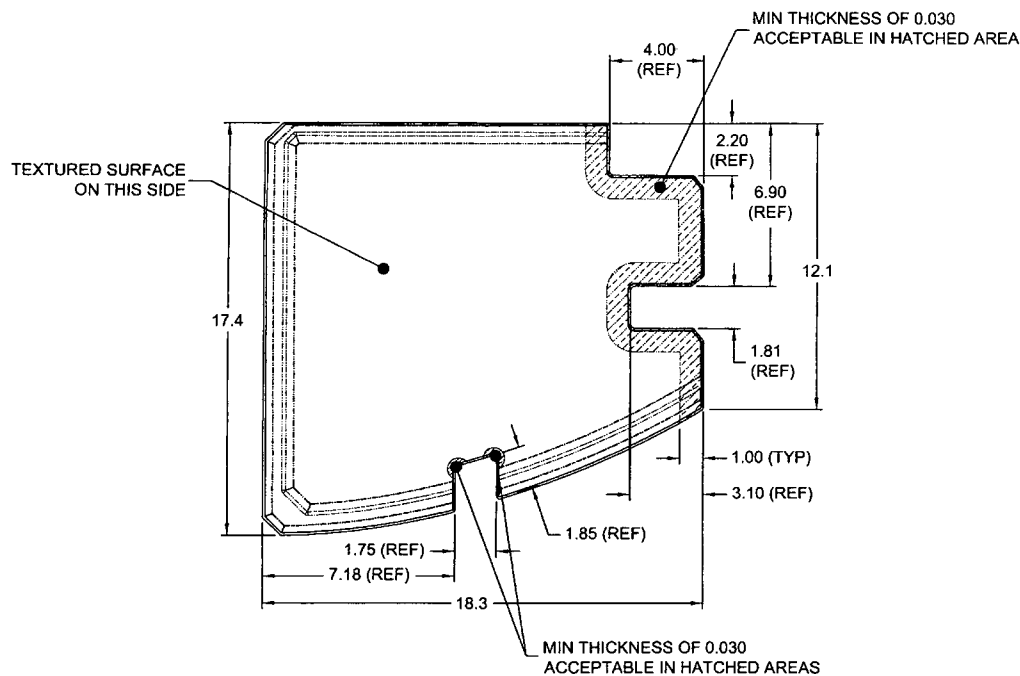
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3281-2 FLOOR PROTECTOR

NOTES:

- 1) MATERIAL: -2L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-2L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENT WITH DART P/N "D3281-2Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-2L02 = 0.95 lb D3281-2L08 = 1.13 lb
- 8) THERMOFORM WITH MOLD D3281-2T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED

RELEASED
R 2010-11-25

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D3281	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		FLOOR PROTECTOR	NTS
DATE	10.09.27	COPYRIGHT © 2004 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

D

C

B

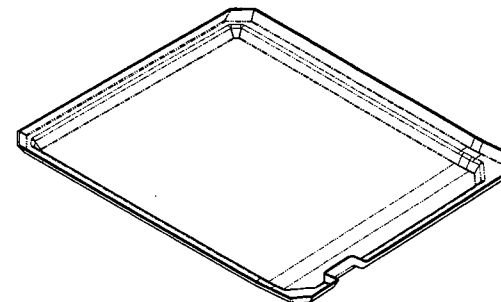
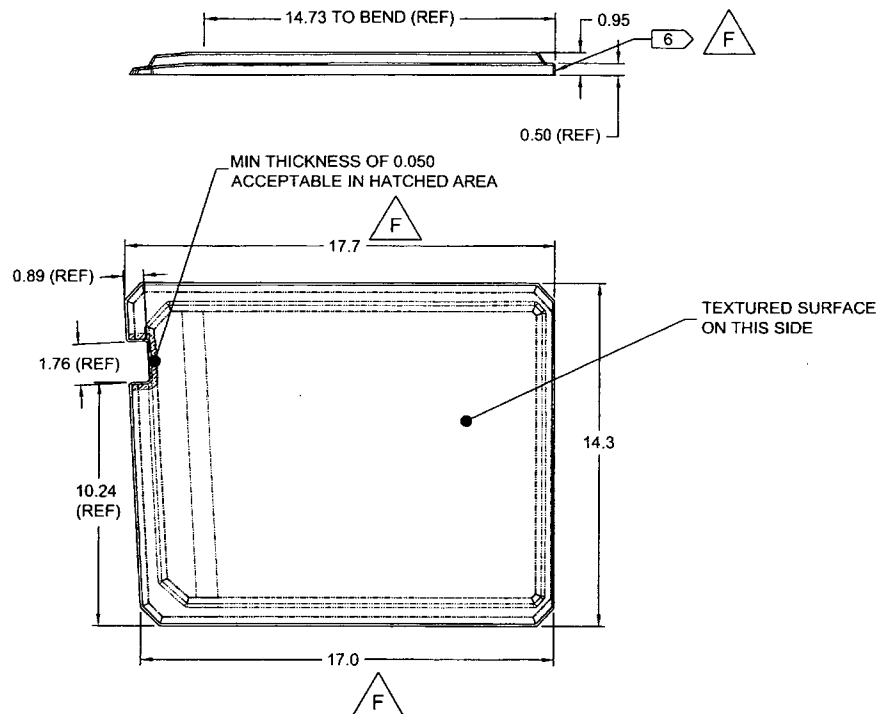
A

D

C

B

A



D3281-3 FLOOR PROTECTOR

NOTES:

- 1) MATERIAL: -3L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-3L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENT WITH DART P/N "D3281-3Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-3L02 = 0.87 lb D3281-3L08 = 1.05 lb
- 8) THERMOFORM WITH MOLD D3281-3T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED



71915

RELEASE
2010-11-25

DESIGN	<i>90</i>	DART AEROSPACE LTD	
DRAWN	<i>8</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>8</i>	DRAWING NO.	REV. F
MFG. APPR.	<i>8</i>	D3281	SHEET 3 OF 4
APPROVED	<i>8</i>	TITLE	SCALE
DE APPR.	<i>8</i>	FLOOR PROTECTOR	NT
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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

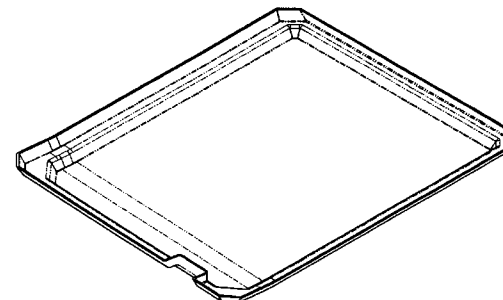
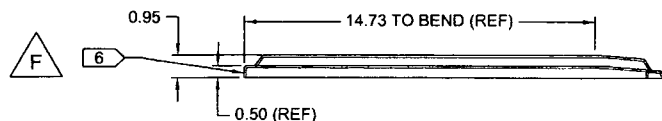
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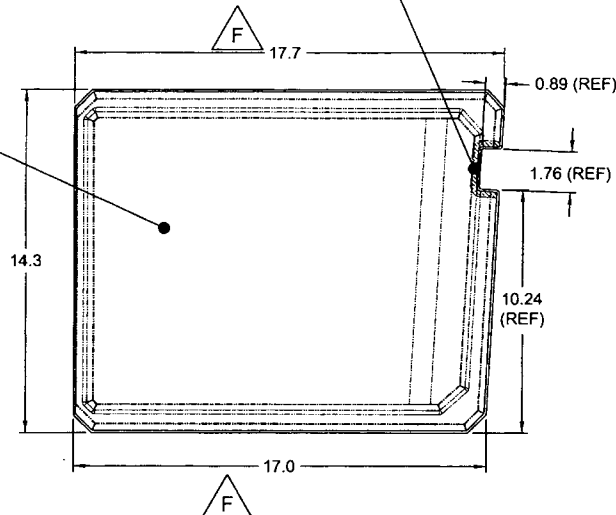
8 7 6 5 4 3 2 1

D



MIN THICKNESS OF 0.050
ACCEPTABLE IN HATCHED AREA

TEXTURED SURFACE
ON THIS SIDE



D3281-4 FLOOR PROTECTOR

71915

RELEASE
2010-11-25

D3281-4 NOTES:

- 1) MATERIAL: -4L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-4L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENTIFICATION: IDENT WITH DART P/N "D3281-4Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-4L02 = 0.87 lb D3281-4L08 = 1.05 lb
- 8) THERMOFORM WITH MOLD D3281-4T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
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8 7 6 5 4 3 2 1

A

A

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